

**Notice of Allowability**

Application No.

09/990,316

Examiner

Jason Crawford

Applicant(s)

SCHOFIELD, WILLIAM G.J.

Art Unit

2819

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/21/01.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

SPE Renford Barne

## DETAILED ACTION

### *Allowable Subject Matter*

Claims 1-14 are allowed. The following is an examiner's statement of reasons for allowance:

In regards to Claim 1, the prior art does not directly disclose of a  $2^n-1$  shuffling network comprising a shuffle exchange network for receiving  $2^n-1$  data inputs and a dummy input and providing  $2^n$  outputs, a replacement set of  $2^n-1$  data switches for receiving  $2^n-1$  outputs from said shuffle exchange network and a selection circuit for actuating selective ones of said  $2^n-1$  data switches in said replacement set to replace one of the  $2^n-1$  outputs of the shuffle exchange network with the  $2^{nth}$  output of the shuffle exchange network, nor would it have been obvious to one of ordinary skill in the art to do so. Therefore, Claims 2-12 are also allowable as being dependent on the independent Claim 1.

In regards to Claim 13, the prior art does not directly disclose of a  $2^n-1$  shuffling network comprising a shuffle exchange network for receiving  $2^n-1$  data inputs and a dummy input and providing  $2^n$  outputs, a replacement set of  $2^n-1$  data switches for receiving  $2^n-1$  outputs from said shuffle exchange network wherein each said data switch in said replacement set of data switches including a two to one multiplexer and a selection circuit for actuating selective ones of said  $2^n-1$  data switches in said replacement set to replace one of the  $2^n-1$  outputs of the shuffle exchange network with the  $2^{nth}$  output of the shuffle exchange network, nor would it have been obvious to one of ordinary skill in the art to do so.

In regards to Claim 14, the prior art does not directly disclose of a  $2^n-1$  shuffling network comprising a shuffle exchange network for receiving  $2^n-1$  data inputs and a dummy input and providing  $2^n$  outputs, said shuffle exchange network including at least one set of shuffle data switches wherein each said data switch in said set of shuffle data switches including a two to one multiplexer, a replacement set of  $2^n-1$  data switches for receiving  $2^n-1$  outputs from said shuffle exchange network and a selection circuit for actuating selective ones of said  $2^n-1$  data switches in said replacement set to replace one of the  $2^n-1$  outputs of the shuffle exchange network with the  $2^{nth}$  output of the shuffle exchange network, nor would it have been obvious to one of ordinary skill in the art to do so

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Crawford whose telephone number is 571-272-6004. The examiner can normally be reached on Monday - Friday 7am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rex Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMC

SPE Renford Barne  
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